REMARKS

I. Introduction

Pending claims 1-25 have been examined and are rejected. Specifically, claims 1-4, 6-9, 11-14 and 16-17 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent Publication No. 2003/0191970 to Devine et al. (hereinafter "Devine") in view of U.S. Patent No. 6,738,975 to Yee et al. (hereinafter "Yee"); claims 5, 10, 15 and 18 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Devine in view of Yee, and further in view of U.S. Patent No. 6,094,688 to Mellen-Garnett et al. (hereinafter "Mellen-Garnett"); and claims 19-25 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Yee in view of Mellen-Garnett.

Furthermore, claims 19-25 are rejected under 35 U.S.C. § 101 as allegedly lacking utility. Further still, claims 6-10 and 11-15 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite.

By way of overview, Applicant overcomes the rejections of claim 19-25 under § 101; the rejections of claims 6-10 and 11-15 under § 112, second paragraph; and the rejections of claims 1-25 under § 103(a) as follows.

II. Double Patenting Rejections

With respect to the present application, the Examiner alleges six grounds of double patenting, as set forth on pages 2-6 of the Office Action, based on U.S. Application Nos. 09/849,105; 09/849,190 (now U.S. Patent No. 6,775,680); 09/849,563; 09/849,813, 09/849,816

and 10/310,343, respectively. Applicant submits herewith a Terminal Disclaimer to overcome each of these alleged grounds of double patenting.

III. Claim Rejections -- 35 U.S.C. § 101

As noted above, claims 19-25 stand rejected under § 101 as allegedly being inoperative and therefore lacking utility (Office Action: page 6). As an initial matter, Applicant amends claim 19 to further clarify that the recited storage medium is a computer-readable storage medium.

The Examiner alleges that claim 19 "claims a product only without any function and use and the purpose of the product" (Office Action: page 6). To the contrary, claim 19 is directed to a program product comprising a computer-readable storage medium having, *inter alia*, computer instructions stored thereon. These computer instructions are for the useful purpose of "building a metamodel metadata repository of source and target language metamodel metadata." Thus, claim 19 clearly satisfies the utility requirement of § 101.

Furthermore, the Examiner fails to provide any evidence in support of the allegation that the program product recited in claim 19 is inoperative. Indeed, it is respectfully submitted that the program product of claim 19 is operative.

In view of the above, it is respectfully submitted that claims 19-25 satisfy the utility requirement of § 101.

IV. Claim Rejections -- 35 U.S.C. § 112, Second Paragraph

As noted above, claims 6-10 and 11-15 stand rejected under § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention (Office Action: page 7).

It is respectfully submitted that the amendments to claims 6 and 11, which correct the various issues identified by the Examiner, overcome the § 112, second paragraph, rejections of claims 6-10 and 11-15.

V. Claim Rejections – 35 U.S.C. § 103(a)

A. Claims 1-4, 6-9, 11-14 and 16-17

As noted above, claims 1-4, 6-9, 11-14 and 16-17 stand rejected under § 103(a) as allegedly being unpatentable over Devine in view of Yee.

Claim 1 recites, *inter alia*, that "the end user application and the application server have at least one connector therebetween," for "(i) converting the application request from the first language of the first end user application as a source language to the second language running on the application server as a target language, and (ii) converting the response to the application request from the second language running on the application server as a source language to the first language of the first end user application as a target language." In claim 1, the connector performs each of these conversions by: "1) invoking connector metamodels and type descriptor metamodels of respective source and target languages; 2) populating the connector metamodels

with metamodel data of each of the respective source and target languages; and 3) converting the source language to the target language."

The Examiner acknowledges that Devine fails to teach or suggest these features of claim 1 (Office Action: page 10). The Examiner alleges, however, that Yee makes up for the acknowledged deficiencies of Devine (Office Action: page 10; *citing* Yee: col. 21, lines 1-11 and 43-55).

To the contrary, Yee describes that a user creates a mapping definition whereby the user identifies the message definitions that define the messages the user wants to use as input and to produce as outputs (Yee: col. 21, lines 1-11). In Yee, the user then creates a sequence of steps that define when to read input data, how to transform the input data, how to map the input data from input message definitions to output message definitions, and when to write the transformed data to actual output messages (*Id.*).

In this manner, the user can transform input data in any way necessary to create the output messages the user needs (Yee: col. 21, lines 12-24). For example, a user can create a transformation expression that specifies selecting only certain characters from a message item, or padding a message item with spaces to make it the right length for the corresponding data field in the target application (*Id.*).

After the user has created the mapping definition, the user can then assign the mapping definition to one or more transformers (Yee: col. 21, lines 38-48). In Yee, a transformer is created by the user to implement the user-created mapping definitions (*Id.*). In particular, when

the user creates the transformer, the user specifies objects to use as sources of the primary input message and the objects that are to be targets for the output messages (*Id.*). The user also specifies the objects that are to reply to requests for supporting inputs (*Id.*).

Thereafter, when the transformer receives a primary input message from a source object, the transformer runs the sequence of steps defined in the mapping definition that make up the transformation process (Yee: col. 21, lines 49-55). The transformer reads the primary and supporting input messages, transforms the input data, writes the transformed data to output messages, and sends the output messages to the target objects (*Id.*).

It is respectfully submitted that the user-created mapping definitions, message definitions and transformers, as described in Yee, each fails to teach or suggest the connector recited in claim 1.

For example, the user-specified transformation of input data into a form needed for output data (*see, e.g.*, Yee: col. 21, lines 13-18) does not correspond to a connector converting an application request from a first language into a second language, let alone a connector "converting the application request from the first language of the first end user application as a source language to the second language running on the application server as a target language" and "converting a response to the application request from the second language running on the application server as a source language to the first language of the first end user application as a target language," as recited in claim 1.

Furthermore, the transformation of input data into a form needed for output data (*see, e.g.*, Yee: col. 21, lines 13-18) does not correspond to a connector that invokes connector metamodels and type descriptor metamodels of the source and target languages, populates the connector metamodels with metamodel data of each of the source and target languages, and converts the source language to the target language, when converting the application request from the first language of the first end user application as a source language to the second language running on the application server as a target language, as recited in claim 1.

Further still, the transformation of input data into a form needed for output data (*see, e.g.*, Yee: col. 21, lines 13-18) does not correspond to a connector that invokes connector metamodels and type descriptor metamodels of the source and target languages, populates the connector metamodels with metamodel data of each of the source and target languages, and converts the source language to the target language, when converting a response to the application request from the second language running on the application server as a source language to the first language of the first end user application as a target language, as recited in claim 1.

For at least these exemplary reasons, claim 1 is not rendered obvious by the proposed combination of Devine and Yee. Claims 6, 11 and 16 recite features similar to claim 1 and, thus, claims 6, 11 and 16 are patentable over the proposed combination of Devine and Yee based on a rationale analogous to that set forth above for claim 1. Consequently, claims 2-4, 7-9, 12-14 and 17 are patentable over the proposed combination of Devine and Yee at least by virtue of their dependency.

B. Claims 5, 10, 15 and 18

As noted above, claims 5, 10, 15 and 18 stand rejected under § 103(a) as allegedly being unpatentable over Devine in view of Yee, and further in view of Mellen-Garnett.

It is respectfully submitted that Mellen-Garnett fails to makes up for the exemplary deficiencies of Devine and Yee, as set forth above for claims 1, 6, 11 and 16. Consequently, claims 5, 10, 15 and 18 are patentable over the proposed combination of Devine, Yee and Mellen-Garnett at least by virtue of their dependency, as well as the additional features recited therein.

For example, claim 5 recites that "the type descriptor metamodel data defines physical realizations, storage mappings, data types, data structures, and realization constraints" (*see also* claims 10, 15 and 18). It is respectfully submitted that the proposed combination of Devine, Yee and Mellen-Garnett fails to teach or suggest type descriptor metamodel data that define the physical realizations, storage mappings, data types, data structures, and realization constraints for each of the source and target languages.

C. Claims 19-25

As noted above, claims 19-25 stand rejected under § 103(a) as allegedly being unpatentable over Yee in view of Mellen-Garnett.

Claim 19 is directed to a program product comprising a computer-readable storage medium having invocation metamodel metadata, application domain interface metamodel metadata, language metamodel metadata, and type descriptor metamodel data stored thereon.

Additionally, the computer-readable storage medium of claim 19 stores computer instructions for building a metamodel data repository of source and target language metamodel metadata. The Examiner alleges that Yee teaches these features of claim 19 by describing a repository service 140 (Office Action: page 17; *citing* Yee: col. 15, lines 55-58).

In Yee, an enterprise application integration (EAI) system 100 includes a repository service 140 (Yee: Fig. 2). The repository service 140 comprises a relational database and an interface to the relational database (Yee: col. 15, lines 55-58). The relational database contains the specifications for the EAI system 100, meta-data and message broker service rules (*Id.*).

Yee (like Mellen-Garnett), however, fails to teach or suggest instructions for building any metamodel metadata repository, let alone building a metamodel metadata repository that includes metamodel metadata for both a source language and a target language.

Furthermore, Yee (like Mellen-Garnett) fails to teach or suggest a computer-readable storage medium having type descriptor metamodel data stored thereon.

For at least the above reasons, it is respectfully submitted that claim 19 is not rendered obvious by the proposed combination of Yee and Mellen-Garnett. Consequently, claims 20-25 are patentable over the proposed combination of Yee and Mellen-Garnett at least by virtue of their dependency, as well as the additional features recited therein.

For example, claim 21 recites that the computer-readable storage medium includes computer instructions to build a connector for "1) retrieving connector metamodel data of respective source and target languages from the metamodel data repository; 2) populating the

connector metamodels with metamodel data of each of the respective source and target languages from the metamodel data repository and invoking the retrieved, populated connector metamodels; and 3) converting the source language to the target language. Since Mellen-Garnett fails to make up for the exemplary deficiencies of Yee, as set forth above for claim 1, it is respectfully submitted that claim 21 is patentable over Yee and Mellen-Garnett based on a rationale analogous to that set forth above for claim 1.

VI. Formal Matters

Information Disclosure Statement

The Examiner provides a signed and initialed copy of the Form PTO-1449 submitted with Applicant's IDS filed on January 30, 2002, thereby indicating consideration of the references cited therein.

Specification

Applicant amends the specification to update the information on the related applications cited in the specification.

Claims

Applicant amends claims 1, 3-6, 8-11 and 13-25 to correct minor typographical errors, thereby overcoming any objections to these claims.

VII. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

Billy Carter Raulerson

Billy Carter Raulerson
Registration No. 52,156

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE
23373
CUSTOMER NUMBER

Date: September 29, 2004